CUBIT Capability Proposal

Technical Area	**Technical Lead**
Geometry, Meshing, Infrastructure, GUI, Graphics, etc..	Cubit Developer in charge of technical area
Meshing	Matt Staten

MRD Description

Describe the capability in terms of how a user would see it.

Provide many-to-one sweeping in CAMAL sweeper.

SRS Description

What needs to be done by Cubit developers to implement this capability? Break the tasks into steps if applicable. (Steps should be on the order of 2 man-weeks or more)

1. Modify CAMAL sweeper to allow multiple source surface meshes.
2. Move/rewrite Cubit code that identifies one-to-one sweepable blocks to CAMAL sweeper.
3. Remove old sweeping code from Cubit; use CAMAL sweeper instead.

Justification

Describe why this is important and what impact it will have if it is implemented. (or not implemented).

This will complete the implementation of the CAMAL sweeper. This was originally targeted for Ver. 10.1 but was delayed by the complexity of modifying the existing Cubit sweeping code. The CAMAL implementation will eliminate the complexity of the current code by separating one-to-one, many-to-one, and many-to-many sweeping. The first two, one-to-one and many-to-one, will be in the CAMAL sweeper. Many-to-many sweeping will continue to be independent of but able to use the CAMAL sweeper after generating sweepable blocks.

Resources	**Time estimate**	**Targeted Release**
Who will work on this	How much time will it take in man-weeks	10.2 (August 06), 10.3 (March 2007), 10.4 (August 2007), Future (beyond FY07)
Michael Stephenson	6 man-weeks	10.2

Submitted By:	**Date:**
Michael Stephenson	3/27/2006